SYSTEMS AND METHODS FOR ELECTROSURGICAL DISSECTION AND HARVESTING OF TISSUE

ABSTRACT OF THE DISCLOSURE

The present invention provides systems, apparatus and methods for selectively applying electrical energy to body tissue in order to incise, dissect, harvest or transect tissues or an organ of a patient. The electrosurgical systems and methods are useful, *inter alia,* for accessing, dissecting, and transecting a graft blood vessel , such as the internal mammary arteries (IMA) or the saphenous vein, for use in a by-pass procedure. A method of the present invention comprises positioning an electrosurgical probe adjacent the target tissue so that one or more active electrode(s) are brought into at least partial contact or close proximity with a target site in the presence of an electrically conductive fluid. A high frequency voltage is then applied between the active electrode and one or more return electrode(s). During application of the high frequency voltage, the electrosurgical probe may be translated, reciprocated, or otherwise manipulated such that the active electrode is moved with respect to the tissue. The present invention volumetrically removes the tissue at the point of incision, dissection, or transection in a cool ablation process that minimizes thermal damage to surrounding, non-target tissue.